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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,863	03/03/2004	Ryouta Hata	2004-0282A	3109

513 7590 07/31/2007

WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER	
DHARIA, PRABODH M	
ART UNIT	PAPER NUMBER
2629	

MAIL DATE	DELIVERY MODE
07/31/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/790,863	HATA ET AL.	
	Examiner	Art Unit	
	Prabodh M. Dharia	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 June 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-10 and 12-15* is/are rejected.

7)☒ Claim(s) *5,11 and 16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. **Status:** Please all replies and correspondence should be addressed to examiner's new art unit 2629. Receipt is acknowledged of papers submitted on 06-22-2007 under amendments, which have been placed of record in the file. Claims 1-16 are pending in this action.

Response to Amendment

2. The amendments filed on 06-22-2007 do not introduce any new matter into the disclosure. The added material is supported by the original disclosure.

3. The abstract has been amended per objection; therefore objection to abstract is withdrawn. Applicant has amended the specification to include editorial amendments that have been made for grammatical and general readability purposes. No new matter has been added.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-4,6-10 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabe et al. (US 7,161,576 B2) in view of Winker; Bruce et al. (US 6,710,831 B1).

Regarding Claim 1, Kawabe et al. teaches a display method (Col. 7, Lines 50,51,64, Col. 35, Lines 25,26) for use with a light source (Col. 8, Lines 9-15); and a display device operable to

display pictures in accordance with a video signal (see figure 70 item # 7402, the video data received by 7401 and header is part of the received video data having required video data for image display Col. 42, Lines 54-65, Col. 35, Lines 31-41), said method comprising: displaying pictures on the display device according to a display timing (Col. 42, Line 65 to Col. 43, Line 6); illuminating the display device with light from the light source in response to a light source-controlling signal (Col. 27, Line 67 to Col. 28, Line 8, Col. 8, Lines 8-15); changing an amount of light emitted from the light source according to a light-change timing (Col. 26, Line 29 to Col. 27, Line 30, Col. 28, Lines 42-47); and wherein the amount of light includes 0%, 100% (Col. 30, Line 60 to Col. 31, Line 2, discloses dark (0%) to bright lighting (100%)) synchronizing the display timing with the light-change timing (Col. 26, Line 29 to Col. 27, Line 30, Col. 42, Line 65 to Col. 43, Line 6) ; and adjusting transmissivity of the display device in accordance with the amount of light (Col. 28, Lines 62-67, Col. 29, Lines 21-30, Col. 30, Lines 32-42, Col. 30, Line 60 to Col. 31, Line 2).

However, Kawabe et al. fails to disclose a value there between; (or intermediate lighting).

However, Winker et al. discloses a value there between; (or intermediate lighting) (Col. 11, Lines 60-64, discloses intermediate states for backlighting, Col. 4, Lines 22-41, discloses 0% (dark) and 100% (bright) of backlighting operation with respect to ambient light operation).

The reason to combine a display like LCD can be switched between "reflective" and "transmissive" modes to primarily reflect light when ambient lighting is high, and to primarily transmit light when ambient lighting is low and backlighting is needed and because of tuning capabilities the mirror and backlight is controlled to produce intermediated state to produce better contrast reflective as well as transmissive display.

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Winker et al. in to the teaching of Kawabe et al. to be able to a display like LCD can be switched between "reflective" and "transmissive" modes to primarily reflect light when ambient lighting is high, and to primarily transmit light when ambient lighting is low and backlighting is needed and because of tuning capabilities the mirror and backlight is controlled to produce intermediated state to produce better contrast reflective as well as transmissive display and saves battery life by reducing the amount of backlighting needed when operating the LCD in the transmissive mode, and increases contrast and brightness when operating in the reflective mode (Abstract, Col. 1, Lines 41-48).

Regarding Claim 2, Kawabe et al. teaches video signal-analyzing unit 1matches the timing at which said light source changes the light-emitting amount with a timing at which said display device renews half of an image plane (Col. 23, line 23 to col. 24, line 4, Col. 24, Lines 33-64, Col. 27, Line 47 to col. 28, Line 19).

Regarding Claim 3, Kawabe et al. teaches video signal-analyzing unit synchronizes, in response to a Vsync-signal from said display device, the timing at which said display device displays the picture with the timing at which said light source changes the light-emitting amount (Col. 23, line 23 to col. 24, line 4, Col. 24, Lines 33-64, Col. 27, Line 47 to col. 28, Line 19, Col. 14, Lines 13-24, Col. 13, Lines 35-38).

Regarding Claim 4, Kawabe et al. teaches video-signal-analyzing unit adjusts synchronous timing in accordance with at least one of a period of time in which the video signal is transferred to said display device from said video signal-adjusting unit and a period of time in which said display device responds to the video signal (Col. Col. 41, Lines 6-52, Col. 42, Line 43 to Col. 43, Line 21, Col. 35 Lines 20-41, Col. 27, Line 47 to col. 28, Line 19, Col. 34, line 60 to Col. 35, Line 41).

Regarding Claim 6, Kawabe et al. teaches teaches extracting a feature parameter of the video signal, wherein said synchronizing is adjusted in timing in accordance with the feature parameter (Col. 15, line 50 to Col. 16, Line 22, Col. 33, Lines 28-63, Col. 34, line 60 to Col. 35, Line 41).

Regarding Claim 7, Kawabe et al. teaches a display controller (Col. 8, Lines 1-9, Col. 42, Lines 54,55) for use with a display device (Col. 7, Line 50,51,64); and a light source (Col. 8, Lines 9-15), said display controller comprising: a video signal-analyzing unit (see figure 70 item # 7402, the video data received by 7401 and header is part of the received video data having required video data for image display operable to receive (Col. 42, Lines 54-65), and analyze a video signal, and to generate adjustment parameter information and light source light-emitting amount information (see figures 16,17; teaches parameter information for display see Col. 18, Lines 33-57, see figures 69,70 teaches header part of the video signal contains similar parameters including brightness information provided by parameter Col. 27, Line 63 to Col. 18, line 8, retrieved by analyzing the header information Col. 41, Lines 6-52, Col. 42, Line 54 to Col. 43,

Line 3); a video signal-adjusting unit operable to receive the video signal, adjust the video signal in accordance with the adjustment parameter information from said video signal-analyzing unit (see figures 16-20, 69,70, Col. 18, Lines 33-57, Col. 27, Line 63 to Col. 18, Line 8, Col. 41, Lines 6-52, Col. 42, Line 54 to Col. 53, Line 3), and to feed the adjusted video signal into the display device; and a light source-controlling unit operable to feed a light source-controlling signal into the light source in accordance with the light source light-emitting amount information from said video signal-analyzing unit (header part of the video signal contains similar parameters including brightness information provided by parameter Col. 27, Line 63 to Col. 18, line 8, retrieved by analyzing the header information Col. 41, Lines 6-52, Col. 42, Line 54 to Col. 43, Line 3), wherein said video signal-analyzing unit synchronizes a timing at which the display device is to display a picture based on the adjusted video signal from said video signal-adjusting unit, with a timing at which the light source is to change a light-emitting amount in response to the light source-controlling signal from said light source-controlling unit (see figures 16,17; teaches parameter information for display see Col. 18, Lines 33-57, see figures 69,70 teaches header part of the video signal contains similar parameters including brightness information provided by parameter Col. 27, Line 63 to Col. 18, line 8, retrieved by analyzing the header information Col. 41, Lines 6-52, Col. 42, Line 54 to Col. 43, Line 3, Col. 35 Lines 20-41, Col. 27, Line 47 to col. 28, Line 19); the amount of light includes 0%, 100% (Col. 30, Line 60 to Col. 31, Line 2, discloses dark (0%) to bright lighting (100%)), and wherein video signal adjusting unit (Col. 24, Lines 5-29, 57-67, Col. 26, Line 29 to Col. 27, Line 30, Col. 42, Line 65 to Col. 43, Line 6) ; adjusts transmissivity of the display device in accordance with the amount of light

(Col. 28, Lines 62-67, Col. 29, Lines 21-30, Col. 30, Lines 32-42, Col. 30, Line 60 to Col. 31, Line 2).

However, Kawabe et al. fails to disclose a value there between; (or intermediate lighting).

However, Winker et al. discloses a value there between; (or intermediate lighting) (Col. 11, Lines 60-64, discloses intermediate states for backlighting, Col. 4, Lines 22-41, discloses 0% (dark) and 100% (bright) of backlighting operation with respect to ambient light operation).

The reason to combine a display like LCD can be switched between "reflective" and "transmissive" modes to primarily reflect light when ambient lighting is high, and to primarily transmit light when ambient lighting is low and backlighting is needed and because of tuning capabilities the mirror and backlight is controlled to produce intermediated state to produce better contrast reflective as well as transmissive display.

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Winker et al. in to the teaching of Kawabe et al. to be able to a display like LCD can be switched between "reflective" and "transmissive" modes to primarily reflect light when ambient lighting is high, and to primarily transmit light when ambient lighting is low and backlighting is needed and because of tuning capabilities the mirror and backlight is controlled to produce intermediated state to produce better contrast reflective as well as transmissive display and saves battery life by reducing the amount of backlighting needed when operating the LCD in the transmissive mode, and increases contrast and brightness when operating in the reflective mode (Abstract, Col. 1, Lines 41-48).

Regarding Claim 8, Kawabe et al. teaches video signal-analyzing unit 1matches the timing at which said light source changes the light-emitting amount with a timing at which said display device renews half of an image plane (Col. 23, line 23 to col. 24, line 4, Col. 24, Lines 33-64, Col. 27, Line 47 to col. 28, Line 19).

Regarding Claim 9, Kawabe et al. teaches video signal-analyzing unit synchronizes, in response to a Vsync-signal from said display device, the timing at which said display device displays the picture with the timing at which said light source changes the light-emitting amount (Col. 23, line 23 to col. 24, line 4, Col. 24, Lines 33-64, Col. 27, Line 47 to col. 28, Line 19, Col. 14, Lines 13-24, Col. 13, Lines 35-38).

Regarding Claim 10, Kawabe et al. teaches video-signal-analyzing unit adjusts synchronous timing in accordance with at least one of a period of time in which the video signal is transferred to said display device from said video signal-adjusting unit and a period of time in which said display device responds to the video signal (Col. Col. 41, Lines 6-52, Col. 42, Line 43 to Col. 43, Line 21, Col. 35 Lines 20-41, Col. 27, Line 47 to col. 28, Line 19, Col. 34, line 60 to Col. 35, Line 41).

Regarding Claim 12, Kawabe et al. teaches a display apparatus (Col. 7, Lines 50,51) comprising: a display device (Col. 7, Line 64); a light source (Col. 8, Lines 9-15); and a display controller (Col. 8, Lines 1-9, Col. 42, Lines 54,55) comprising: a video signal-analyzing unit operable to receive and analyze a video signal (see figure 70 item # 7402, the video data received

by 7401 and header is part of the received video data having required video data for image display Col. 42, Lines 54-65), and to generate adjustment parameter information and light source light-emitting amount information (see figures 16,17; teaches parameter information for display see Col. 18, Lines 33-57, see figures 69,70 teaches header part of the video signal contains similar parameters including brightness information provided by parameter Col. 27, Line 63 to Col. 18, line 8, retrieved by analyzing the header information Col. 41, Lines 6-52, Col. 42, Line 54 to Col. 43, Line 3), a video signal-adjusting unit operable to receive the video signal, adjust the video signal in accordance with the adjustment parameter information from said video signal-analyzing unit, and to feed the adjusted video signal into said display device (see figures 16-20, 69,70, Col. 18, Lines 33-57, Col. 27, Line 63 to Col. 18, Line 8, Col. 41, Lines 6-52, Col. 42, Line 54 to Col. 53, Line 3); and a light source-controlling unit operable to feed a light source-controlling signal into said light source in accordance with the light source light-emitting amount information from said video signal-analyzing unit (header part of the video signal contains similar parameters including brightness information provided by parameter Col. 27, Line 63 to Col. 18, line 8, retrieved by analyzing the header information Col. 41, Lines 6-52, Col. 42, Line 54 to Col. 43, Line 3), wherein said video signal-analyzing unit synchronizes a timing at which said display device displays a picture based on the adjusted video signal from said video signal-adjusting unit, with a timing at which said light source changes a light-emitting amount in response to the light source-controlling signal from said light source- controlling unit (Col. 24, Lines 5-29, 57-67, Col. 26, Line 29 to Col. 27, Line 30, Col. 42, Line 65 to Col. 43, Line 6); the amount of light includes 0%, 100% (Col. 30, Line 60 to Col. 31, Line 2, discloses dark (0%) to bright lighting (100%)), and wherein video signal adjusting unit (Col. 24, Lines 5-29, 57-67, Col.

26, Line 29 to Col. 27, Line 30, Col. 42, Line 65 to Col. 43, Line 6); adjusts transmissivity of the display device in accordance with the amount of light (Col. 28, Lines 62-67, Col. 29, Lines 21-30, Col. 30, Lines 32-42, Col. 30, Line 60 to Col. 31, Line 2) wherein said display device is operable to display a picture in accordance with the adjusted video signal that is fed from said video signal-adjusting unit of said display controller; and wherein said light source is operable to illuminate said display device with light in accordance with the light source-controlling signal that is fed from said light source-controlling unit of said display controller (see figures 16,17; teaches parameter information for display see Col. 18, Lines 33-57, see figures 69,70 teaches header part of the video signal contains similar parameters including brightness information provided by parameter Col. 27, Line 63 to Col. 18, line 8, retrieved by analyzing the header information Col. 41, Lines 6-52, Col. 42, Line 54 to Col. 43, Line 3, Col. 35 Lines 20-41, Col. 27, Line 47 to col. 28, Line 19).

However, Kawabe et al. fails to disclose a value there between; (or intermediate lighting).

However, Winker et al. discloses a value there between; (or intermediate lighting) (Col. 11, Lines 60-64, discloses intermediate states for backlighting, Col. 4, Lines 22-41, discloses 0% (dark) and 100% (bright) of backlighting operation with respect to ambient light operation).

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Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Winker et al. in to the teaching of Kawabe et al. to be able to a display like LCD can be switched between "reflective" and "transmissive" modes to primarily reflect light when ambient lighting is high, and to primarily transmit light when ambient lighting is low and backlighting is needed and because of tuning capabilities the mirror and backlight is controlled to produce intermediated state to produce better contrast reflective as well as transmissive display and saves battery life by reducing the amount of backlighting needed when operating the LCD in the transmissive mode, and increases contrast and brightness when operating in the reflective mode (Abstract, Col. 1, Lines 41-48).

Regarding Claim 13, Kawabe et al. teaches video signal-analyzing unit 1matches the timing at which said light source changes the light-emitting amount with a timing at which said display device renews half of an image plane (Col. 23, line 23 to col. 24, line 4, Col. 24, Lines 33-64, Col. 27, Line 47 to col. 28, Line 19).

Regarding Claim 14, Kawabe et al. teaches video signal-analyzing unit synchronizes, in response to a Vsync-signal from said display device, the timing at which said display device displays the picture with the timing at which said light source changes the light-emitting amount (Col. 23, line 23 to col. 24, line 4, Col. 24, Lines 33-64, Col. 27, Line 47 to col. 28, Line 19, Col. 14, Lines 13-24, Col. 13, Lines 35-38).

Regarding Claim 15, Kawabe et al. teaches video-signal-analyzing unit adjusts synchronous timing in accordance with at least one of a period of time in which the video signal is transferred to said display device from said video signal-adjusting unit and a period of time in which said display device responds to the video signal (Col. Col. 41, Lines 6-52, Col. 42, Line 43 to Col. 43, Line 21, Col. 35 Lines 20-41, Col. 27, Line 47 to col. 28, Line 19).

Allowable Subject Matter

6. Claims 5,11 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is an examiner's statement of reasons for allowance:

Applicant has amended dependent claims 5,11 and 16 to over come prior art rejection. Applicant's arguments filed on 06-22-2007 are convincing. As argued by applicant in remarks under claim rejection page 13; the prior art of Kawabe et al. (US 7,161,576 B2) in view of Fujii et al. (US 2003/0038886 A1) and all the cited prior arts on 892's and 1449's fails to recite or disclose the uniquely distinct features of the dependent claim limitations below in combination with all the other limitations recited in independent claims:

a temperature sensor operable to detect temperature, wherein said video signal-analyzing unit adjusts synchronous timing in accordance with the temperature detected by said temperature sensor and wherein an interval from the Vsync-signal to when said light

source controlling unit begins to change the amount of light changes in accordance with the temperature detected by said temperature sensor

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

8. Applicant's arguments, see remarks, filed 06-22-2007, with respect to the amendments to independent claim(s) 1,7, and 13 under 35 U.S.C. 102(e) as being anticipated by Kawabe et al. (US 7,161,576 B2) have been fully considered and are persuasive. However, upon further consideration, a new ground(s) of rejection is made in view of Winker; Bruce et al. (US 6,710,831 B1).

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prabodh M. Dharia whose telephone number is 571-272-7668. The examiner can normally be reached on M-F 8AM to 5PM.

11. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Prabodh Dharia

Full Signatory Authority Program

AU 2629

July 25, 2007